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10/525,095	07/20/2005	Jeremy Bowman	09294-020US1	3292
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EXAMINER				
WOOD, ELLEN S				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

### Office Action Summary

**Application No.**

10/525,095

**Applicant(s)**

BOWMAN, JEREMY

**Examiner**

ELLEN S. WOOD

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-21, 23, 24, 26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-21, 23-24 and 26-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/888)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 4 recites the broad recitation "***is at least 50%***", and the claim also recites "***preferably 75%***" which is the narrower statement of the range/limitation.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-4, 7-8, 10, 16, 19-21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jarvenkyla et al. (US 5,759, 461, hereinafter "Jarvenkyla").

Jarvenkyla discloses a multi-layer plastic pipe (col. 1 line 7). The multi-layer plastic pipe has a surface layer that provides a protective layer around a pipe (col. 2 lines 19-22). The protective outer layer is made to easily detach from the core pipe by simple means, either wholly or only at the joint surfaces, such as the pipe ends (col. 2 lines 26-29). The outer layer may also have an adhesion enhancing or inhibiting agent mixed in with the material depending on the use and the materials selected for the outer layer and core pipe (col. 3 line 49-55). The protective outer layer can be made from polypropylene mixed with a wax and the core pipe is made from polyethylene (col. 3 lines 63-65). It is known to one of ordinary skill in the art that wax is an ester of fatty acids. The outer layer may also have an adhesion enhancing or inhibiting agent mixed in with the material depending on the use and the materials selected for the outer layer and core pipe (col. 3 line 49-55). The pipe formed is stiffer, stronger, and is protected against scratching (col. 1 lines 43-46).

When a single layer pipe is formed, often fillers must be mixed with the plastic material which reduces the mechanical properties and weldability of the pipe (col. 1 lines 51-55). In a two-layer pipe according to the present invention, the properties of the core pipe or conducting pipe are optimized for the conduction of fluids, and the outer layer is designed to resist any external conditions and stress (col. 1 lines 55-59).

The core pipe is coated with a surface layer by coextrusion (col. 2 lines 19-20). Co-extrusion dies were used to form the plastic pipes (col. 2 lines 22-25). The surface of the outer layer is moderately hard, whereby it has a low adhesion, and the structure of the layer is moderately stiff, whereby the outer layer can be detached from the pipe (col. 2 lines 31-36), thus the outer layer prevents undesired movement between the skin layer and the core, but the layer can still be removed and provide impact strength of the inner layer.

Jarvenkyla is silent with the amount of reducing additive used and the characteristics of the pipes.

It would be obvious to one of ordinary skill in the art that the amount of adhesion-reducing additive in the skin layer would be discovered by routine experimentation. The amount added to the skin would provide a composition that is optimal when the intended use of the resin composition is for protection and removable qualities when applied to a pipe. The mechanical characteristics of the layer would be dependent on the intended use of the skin layer, such as in a pipe the mechanical strength of the skin layer would need to be increased. The adhesive bond between the skin layer and the inner core layer of 0.2 N/mm to 2.0 N/mm would be discovered by routine

experimentation of the amount of the adhesive component added to the composition to discover optimal conditions for a pipe as to not cause premature unwanted peeling of the skin layer, but still allow the outer skin layer to be detached when appropriate.

6. Claims 11-15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jarvenkyla (US 5,759, 461, hereinafter "Jarvenkyla") in view of Toyosumi et al. (US 6,565, 938, hereinafter "Toyosumi").

Jarvenkyla discloses the multilayer pipe that comprises a removable outer skin layer. The pipe also may have an adhesion-reducing additive added to the outer skin layer.

Jarvenkyla is silent with regards to the different types of adhesion-reducing additives.

Toyosumi discloses a resin composition that has excellent barrier properties. The resin composition may be contain plasticizers (e.g. aliphatic polyhric alcohol) such as glycerol (col. 9 lines 34-35), lubricants such as saturate aliphatic amides (e.g. stearamide) and ethylene-bis-stearamide (col. 9 lines 24-27), and fatty acid esters (col. 9 line 41). The resin composition is has good gas barrier properties, solvent resistance and oil resistance (col. 1 lines 16-18). The resin composition of Toyosumi can be co-extruded with another resin composition (col. 10 lines 34-35). The resin composition is preferably co-extruded with a polyolefin resin layer, such as a polyethylene resin layer (col. 12 lines 66-67). Toyosumi is silent with regards to whether a propylene block co-polymer was used in the resin composition.

It would be obvious to one of ordinary skill in art to use the additives of Toyosumi in the outer skin layer of Jarvenkyla's pipes. The additives of Toyosumi are known in the art as types of additives that provide lubrication which would provide an adhesion reducing properties to the pipe of Jarvenkyla. Also, Jarvenkyla discloses using adhesion-reducing additives that are known to one in the art, thus the addition of the additives in Toyosumi would not destroy the intended purpose of Jarvenkyla.

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jarvenkyla et al. (US 5,759,461, hereinafter "Jarvenkyla") in view of Katz (US 6,127,662).

Jarvenkyla discloses the plastic pipe as described above that has an inner and detachable outer layer. The seaming of pipes is not possible without the outer layer removed first from the area to be seamed (col. 1 lines 63-66). The pipe ends must always be clean when they are seamed, whether by welding or by any other method (col. 1-2 lines 66-67 and 1). Jarvenkyla is silent in regards to the method of welding.

Katz disclose that electrofusion is a technique for joining two pipes together by means of sleeves having coils of electrical heater wire such that the two pipes are fused together (col. 1 lines 7-17). It would be obvious to one of ordinary to combine the plastic pipe of Jarvenkyla with the electrofusion method set forth in Katz to insure that the welding is always successful and that the welding machines operate as intended (col. 2 lines 2-4).

***Response to Arguments***

8. Applicant's arguments with respect to claims 1, 3-4, 7-8, 10-21, 23-24 and 26-27 have been considered but are moot in view of the new ground(s) of rejection.

The use of the Hayakawa reference has been removed from the rejection on the basis that Jarvenkyla discloses the use of an outer removable skin layer formed from propylene with a wax adhesion-reducing additive.

The applicant argues that it would not be reasonable to assume that the additives used in Toyosumi could be used for the adhesion-reducing additive of the outer removable layer of Jarvenkyla. When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. *KSR* at 1396. If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, § 103 likely bars its patentability. *Id.* Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill. *Id.*

One of ordinary skill in the art at the time the invention was made, when viewing the state of the art and the predictable improvements in structures known in the art, would be motivated to improve the outer removable skin layer, of the prior art, with the processes and structure taught by Toyosumi, since the improvements of adhesion-reducing using the various additives in polypropylene were known to one of ordinary skill in the art and it would have predictably improved similar articles in the same way.



***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **ELLEN S. WOOD** whose telephone number is (571)270-3450. The examiner can normally be reached on M-F 730-5 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/  
Supervisory Patent Examiner, Art Unit 1794